herewith and the Examiner's determination of the need for additional searching. Applicant has attached an amended set of claims hereto which is deemed to be consistent with the novel features of the invention discussed during the interview. Applicant has endeavored in the discussion below to identify those portions of the Specification that support the current

5   claim amendments (35 USC § 112).

2.   35 U.S.C. §112. The Examiner has rejected Claims 7-8 and 31-32 under 35 U.S.C. §112, second paragraph.

10   Responsive thereto, Applicant has cancelled Claims 7,8, 31, and 32, thereby rendering this rejection moot.

2.   35 U.S.C. §103. The Examiner has rejected Claims 1-17, 22-41, and 45-61 under 35 U.S.C. §103 as being obvious over Tuck *et al.* (U.S. Pat. No. 6,115,698) in view of

15   Discussion Paper on Aligning Transmissions to Actual Flows (NERC).

Applicant respectfully disagrees. As discussed during the above-mentioned interview, neither Tuck nor the NERC paper, either alone or in combination, teach real time, multidimensional trading of electrical energy and transfer rights across flow gates. Applicant

20   includes herewith for the Examiner's consideration (Exhibit "A") a PowerPoint presentation entitled Introduction to Congestion Management with Flowgates, which describes the prior art and the invention in some detail.

Most fundamental to the invention is the concept of efficiently allocating transmission

25   capacity using a continuous forward market in flow gate rights. The concept of aligning transmission reservations with actual flows using flow gates is prior art. The concept of having a forward market in flow gate rights, where users can freely buy and sell flow gate rights for any future time interval at prices set by the matching of bids and offers is original. Neither the Tuck patent nor the NERC paper proposes a market for transmission. The Tuck

30   patent (also discussed in some detail in Applicant's prior response) proposes a simple first-come, first-served reservation system (see column 12, lines 23-24), while the NERC paper is silent on this topic. Without a transmission market, transmission is not allocated to its highest-valued use and participants who can take action to relieve congestion receive no reward for doing so. Thus, the overall system is inefficient. In fact, transmission for some

35   deals may not be available at any price under a simple first-come first-served reservation system.

It should be emphasized that Applicant's approach allows trading in flow gate rights for any future time interval. This is another way Applicant's approach is distinguished from Tuck, who allows trading only for the next hour (see column 4, lines 3-6). Applicant's approach allows time intervals of varying lengths to be configured, and even allows trading in intervals of varying lengths simultaneously. The Examiner is directed to Figures 34-36 of the subject application, which show trading of intervals having varying lengths. See, also, page 25 of the Specification, especially lines 14-18, which concerns overlapping time intervals. Claim 1 has been amended to reflect this feature of the invention.

Claim 1, as now amended, reads as follows (emphasis added):

1. A method for contracting for a quantity of AC power to be delivered at a determined time interval and AC power transfer for said quantity of AC power on an AC power network via a plurality of flow gates situated along an AC power transfer path from a point of AC power generation to a point of AC power delivery, comprising the steps of:

contracting for said quantity of AC power to be transferred to said point of delivery at said determined time interval on said AC power network;

wherein said quantity of AC power to be transferred comprises one of a plurality of unique AC power transfers on said AC power network via said flow gates, said plurality of transfers each comprising one of both of a plurality of points of AC power generation and delivery and a plurality of respective, determined delivery time intervals;

contracting for an associated AC power transfer on each of said flow gates along said power transfer path from said point of AC power generation to said point of AC power delivery for said contracted quantity of AC power;

determining a sum of AC power transfer for each of said plurality of AC power transfers on each of said flow gates;

wherein said sum is comprised of at least both of AC power transfers which traverse said flow gates in a first direction and countervailing AC power transfers which traverse said flow gates in a second direction;

wherein contracting for AC power transfer on said AC power network and associated AC power transfer on each of said flow gates further comprises the steps of;

providing a virtual trading floor comprising a real time market for trading both quantities of AC power and transfer of said quantities of AC power across each of said flow gates along an associated AC power transfer path from said point of AC power generation

to said point of AC power delivery, said market comprising a plurality of bid orders and a plurality of ask orders; and

<u>matching bid orders to ask orders to create agreed contracts for both of said quantity of AC power and said associated AC power transfer</u> via said flow gates from said point of

5   AC power generation to said point of AC power delivery.

By creating a market for flow gates using Applicant's methodology for summing power transfers and countervailing power transfers at each flow gate the invention provides, for example, the ability to calculate the total point-to-point congestion cost by weighting the

10 cost of each flow gate by the transmission distribution factor (that is, the usage) for each required flow gate. For example, to move one megawatt from point A to point B may require .1 megawatts of flow gate 1 and .2 megawatts of flow gate 2. The .1 and .2 are the transmission distribution factors. If flow gate 1 has a price of $10 per megawatt, and flow gate 2 has a price of $20 per megawatt, the congestion cost for moving one megawatt

15 from point A to point B is .1 x $10 + .2 x $20 = $5.

An especially non-obvious variant of this feature of the invention is the case where moving a megawatt from point A to point B actually relieves congestion across a flow gate (because the movement results in a flow in a direction that is countervailing to that of the

20 congested direction, such that the sum of energy transferred at the congested flow gate is reduced). In this case, the participant would be allowed to sell flow gate rights equivalent to the amount of congestion relief the movement creates. This can be represented with a negative transmission distribution factor. For example, suppose that moving one megawatt from point A to point B resulted in .2 megawatts of additional capacity being

25 created in the congested direction across flowgate 2. If the price of flow gate 2 was still $20 per megawatt, then the cost of moving one megawatt from point A to point B is .1 x $10 + (-.2 x $20) = $-3. That is, the participant gets paid $3 for this movement, to compensate for relieving congestion. This can be seen on Figure 36, where Contracted Flow, Pending Flow, and Total Flow are all expressed in net MW. Support in the Specification is also

30 found at least on page 27, lines 16-22, where Applicant describes the contracting of countervailing AC power transfers, for example to maintain safe carrying capacities through a flow gate; on page 34, lines 13-19, where Applicant describes a sum of power transfers for each flow gate; on page 41, lines 13-24, where Applicant describes real time A C power network balancing; and on page 53, lines 1028, which describes Figures 34-36.

35

A major impediment to getting a workable market for flow gate rights is that it is not obvious

to market participants how much of each flow gate right they need to buy or sell to make their desired movement of power. This is not a problem that arises in traditional contract path markets, such as the one assumed by Tuck, where one megawatt of transmission is always needed to move one megawatt of power. Applicant's approach automates the process of determining how much of each flow gate right a participant needs to buy or sell. The participant is actually offered three alternative approaches.

a) The participant may buy or sell delivered energy as a package with transmission, see Figure 36. The system automatically determines the needed quantities of each flow gate right to facilitate delivery and makes the appropriate energy and flow gate market transactions.

b) The system pops-up a checklist of flow gate rights needed to deliver the energy, showing the quantity of each flow gate right needed (this is an obvious variant of the embodiment shown in Figure 36). The user may check those flow gate rights he wishes to buy or sell.

c) On the screen for trading flow gate rights, the system displays the quantity of each flow gate required to deliver the energy which the user has under contract, and the shortage (or surplus) of that flow gate in the user's holdings relative to what is needed to deliver the contracted energy (this is an obvious variant of the embodiment shown in Figure 36).

In keeping with the foregoing discussion, Applicant has amended Claims 1,4, and 5 and cancelled Claims 2, 3, 6-8, 15, and 18-61. Claims 9-14, 16, and 17 are as originally filed. Such amendments and cancellations are made for purposes of clarity and to simplify the task of examining this application. Such amendments/cancellations should not be construed as a concession on Applicant's part with regard to the merits of the Examiner's rejection. Applicant reserves its right to present claims at a later time of commensurate scope with those herein amended/cancelled.

CONCLUSION

Based on the foregoing, Applicant considers the claimed invention to be distinguished from the art of record. Accordingly, Applicant earnestly solicits the Examiner's withdrawal of the

5   rejections raised in the above referenced Office Action, such that a Notice of Allowance is forwarded to Applicant, and the present application is therefore allowed to issue as a United States patent.

10   Respectfully Submitted,

Michael A. Glenn
Reg. No. 30,176

15

Customer No. 22862

20

1.   (currently amended) A method for contracting for a quantity of AC power to be delivered at a determined time interval and AC power transfer for said quantity of A C power on an AC power network ~~with~~ via a plurality of flow gates situated along an A C power transfer path from a point of AC power generation to a point of AC power delivery ~~gate collection containing at least one flow gate~~, comprising the steps of:

contracting ~~an~~ for said quantity of AC power to be transferred to said point of delivery at said determined time interval ~~transfer~~ on said AC power network ~~comprising;~~

wherein said quantity of AC power to be transferred comprises one of a plurality of AC power transfers which are specific to said flow gates, said plurality of transfers each comprising one of both of a plurality of points of AC power generation and delivery and a plurality of respective, determined delivery time intervals;

contracting for an associated AC power transfer on each of said flow gates ~~of said flow gate collection~~ along said power transfer path from said point of AC power generation to said point of AC power delivery for said contracted quantity of AC power;

determining a sum of all associated AC power transfers on each of said flow gates;

wherein said sum is comprised of at least both of AC power transfers which traverse said flow gates in a first direction and countervailing AC power transfers which traverse said flow gates;

wherein contracting for AC power transfer on said AC power network and associated AC power transfer on each of said flow gates further comprises the steps of;

providing a virtual trading floor comprising a real time market for trading both quantities of AC power and transfer of said quantities of AC power across each of said flow gates along an associated AC power transfer path from said point of AC power generation to said point of AC power delivery, said market comprising a plurality of bid orders and a plurality of ask orders; and

matching bid orders to ask orders to create agreed contracts for both of said quantity of AC power and said associated AC power transfer via said flow gates from said point of AC power generation to said point of AC power delivery.

2.   (cancelled) The method of Claim 1,

wherein contracting for AC power transfer on said AC power network comprises:

contracting for AC power transfer on said AC power network to take place over a first time interval; and

wherein contracting said associated AC power transfer on each of said flow gates of said flow gate collection comprises;

contracting said associated AC power transfer on each of said flow gates of said flow gate collection to take place over at least said first time interval.

5   3.   (cancelled) The method of Claim 2, further comprising:

contracting an AC power transfer collection of at least two AC power transfers on an AC power network further comprises;

contracting a sum of said associated AC power transfer for each of said AC power transfers of said AC power transfer collection on each of said flow gates of said flow gate
10   collection.

4.   (currently amended) The method of Claim 1 3,

wherein each flow gate of said flow gate collection has an associated maximum safe carrying capacity; and

wherein contracting said sum of said associated AC power transfer for each of said
15   AC power transfers of said AC power transfer collection on each of said flow gates of said flow gate collection comprises;

said sum of said associated AC power transfer for each of said AC power transfers of said AC power transfer collection satisfying said associated maximum safe carrying capacity on each of said flow gates of said flow gate collection.

20   5.   (currently amended) The method of Claim 1 3,

wherein each of said AC power transfers of said AC power transfer collection is to take place over a first time interval; and

wherein contracting said sum of said associated AC power transfer for each of said AC power transfers of said AC power transfer collection on each of said flow gates of said
25   flow gate collection comprises;

contracting each of said sum of said associated AC power transfer for each of said AC power transfers of said AC power transfer collection to take place at least over said first time interval.

6.   (cancelled) The method of Claim 3,
30   wherein each of said AC power transfers of said AC power transfer collection has an associated amount of energy from an associated first node of said AC power network to a second node of said AC power network; and

further contracting said sum of said associated AC power transfer for each of said A C power transfers of said AC power transfer collection on each of said flow gates of said flow gate collection comprises;

contracting an amount of energy of said associated AC power transfer on each of said flow gates of said flow gate collection as essentially an associated linear, skew-symmetric function of said associated amount of energy from said associated first node to said associated second node.

7.   (cancelled) The method of Claim 1,

wherein each of said flow gates of said flow gate collection is a significant flow gate of said AC power network.

8.   (cancelled) The method of Claim 1,

wherein each significant flow gate of said AC power network is a flow gate in said flow gate collection.

9.   (original) The method of Claim 1,

wherein contracting for said AC power transfer on said AC power network comprises;

contracting for said AC power transfer on said AC power network to create an agreed contract by a first party to own AC power transfer trading rights with associated A C power transfers on each of said flow gates of said flow gate collection; and

enabling said first party to further contract to sell said first party owned AC power transfer trading rights.

10.   (original) The method of Claim 9,

wherein each of said flow gates of said flow gate collection has an associated maximum safe carrying capacity; and

further comprising scheduling said AC power transfer for said agreed contract comprising:

determining whether said associated AC power transfer of said flow gate of said flow gate collection satisfies said associated maximum safe carrying capacity of said flow gate for each of said flow gates of said flow gate collection; and

approving said AC power transfer whenever said associated AC power transfer of said flow gate satisfies said maximum safe carrying capacity for each said flow gates of said flow gate collection.

11.   (original) The method of Claim 10,

APXX0003

wherein enabling said first party to further contract to sell said first party owned A C power transfer trading rights comprises;

enabling said first party to further contract to sell said first party owned AC power transfer trading rights before scheduling said AC power transfer for said agreed contract.

5   12.   (original) The method of Claim 10,

wherein said agreed contract by said first party to own said AC power transfer trading rights with said associated AC power transfers on a first of said flow gates of said flow gate collection is to take place over a first time interval; and

wherein scheduling said AC power transfer for said agreed contract further

10   comprises:

scheduling said AC power transfer for said agreed contract occurs before said first time interval.

13.   (original) The method of Claim 12,

wherein determining whether said associated AC power transfer of said flow gate of

15   said flow gate collection satisfies said associated maximum safe carrying capacity of said flow gate for each of said flow gates of said flow gate collection further comprises;

determining whether said associated AC power transfer of said flow gate of said flow gate collection satisfies said associated maximum safe carrying capacity of said flow gate for each of said flow gates of said flow gate collection over said first time interval; and

20   wherein approving said AC power transfer whenever said associated AC power transfer of said flow gate satisfies said maximum safe carrying capacity for each said flow gate of said flow gate collection further comprises;

approving said AC power transfer over said first time interval whenever said associated AC power transfer of said flow gate satisfies said maximum safe carrying

25   capacity for each said flow gates of said flow gate collection over said first time interval.

14.   (original) The method of Claim 13, further comprising:

contracting for an AC power transfer collection of at least one AC power transfer to create an agreed contract by a first party to own AC power transfer trading rights with associated AC power transfers on each of said flow gates of said flow gate collection further

30   comprises;

contracting for a sum of associated AC power transfers for all AC power transfers of said AC power transfer collection to create a contract for an associated AC power transfer for said collection of AC power transfers for each of said flow gates of said flow gate collection.

15. (cancelled) The method of Claim 14, further comprising:

wherein each of said AC power transfers of said AC power transfer collection has an associated amount of energy from an associated first node of said AC power network to said second node of said AC power network;

5   wherein contracting for a sum of associated AC power transfers for all AC power transfers of said AC power transfer collection to create a contract for an associated A C power transfer for said collection of AC power transfers for each of said flow gates of said flow gate collection comprises;

calculating said associated AC power transfer on said flow gate of said AC power

10 transfer as an amount of energy which is an essentially linear, skew-symmetric associated function of said amount of energy of said AC power transfer from said associated first node of said AC power transfer to said associated second node of said AC power transfer of each of said flow gates of said flow gate collection.

16. (original) The method of Claim 9, further comprising:

15   wherein enabling said first party to further contract to sell said first party owned A C power transfer trading rights further comprises;

enabling said first party to further contract to sell said first party owned AC power transfer trading rights for said associated AC power transfer for a first of said flow gates of said flow gate collection.

20   17. (original) The method of Claim 16, further comprising:

wherein enabling said first party to further contract to sell said first party owned A C power transfer trading rights further comprises;

enabling said first party to further contract to sell said first party owned AC power transfer trading rights for said associated AC power transfer for each of said flow gates of

25 said flow gate collection.

18. (cancelled) The method of Claim 9,

wherein said first party is a human being.

19. (cancelled) The method of Claim 18,

wherein said first party is a corporate entity.

30   20. (cancelled) The method of Claim 19,

wherein said first party is represented by an agent authorized by said first party to act on behalf of said first party with respect to contracting AC power transfer.

21.   (cancelled) The method of Claim 20,
wherein said agent is a software agent executing on a computer.

22.   (cancelled) The method of Claim 1,
wherein said computing system is comprised of

5   a client computer collection containing at least one client computer operated by a client;

a server system containing at least one server computer; and

a network coupling said client computer of said client computer collection and coupling at least a first of said server computers of said server system; and

10   wherein contracting said AC power transfer on said AC power network further comprises

identifying a first of said clients operating a first of said client computers as said first party.

23.   (cancelled) The method of Claim 22, further comprising:

15   a first client user operating said first client computer as said first party residing on said computer readable memory coupled to said first client computer comprising;

receiving a stimulus from said first user to create a received stimulus stream;

communicating via said network with said first server computer to create a received server stream and to create a server delivery stream; and

20   displaying an interactive status based upon said received stimulus stream and said received server stream; and

wherein contracting said AC power transfer on said AC power network further comprises

communicating via said network with said first client computer to create a received

25   server delivery stream.

24.   (cancelled) The method of Claim 23,
wherein contracting AC power transfer on said AC power network further comprises;
operating a virtual trading floor containing a market for trading AC power transfer for each of said flow gates of said flow gate collection further comprising

30   transforming said received server delivery stream into an order collection containing at least one bid order and at least one ask order; and

contracting AC power transfer on said AC power network to create an agreed contract based upon a first of said bid orders of said order collection and based upon a first of said ask orders of said order collection.

25.   (cancelled) A program operating system executing on a computing system comprised of at least one computer, each of said computers in said computing system coupled to an associated computer readable memory, supporting with program code

5   segments contracting AC power transfer on an AC power network with a flow gate collection containing at least one flow gate, comprising:

        a program code segment supporting contracting an AC power transfer on said A C power network comprising;

        a program code segment supporting contracting an associated AC power transfer

10   on each of said flow gates of said flow gate collection.

26.   (cancelled) The program operating system of Claim 25,

        wherein said program code segment supporting contracting an AC power transfer on said AC power network comprises;

        a program code segment supporting contracting an AC power transfer on said A C

15   power network to take place over a first time interval; and

        wherein said program code segment supporting contracting said associated A C power transfer on each of said flow gates of said flow gate collection comprises;

        a program code segment supporting contracting said associated AC power transfer on each of said flow gates of said flow gate collection to take place over at least said first

20   time interval.

27.   (cancelled) The program operating system of Claim 26, further comprising:

        a program code segment supporting contracting an AC power transfer collection of at least two AC power transfers on an AC power network further comprises

        a program code segment supporting contracting a sum of said associated A C

25   power transfers for each of said AC power transfers of said AC power transfer collection on each of said flow gates of said flow gate collection.

28.   (cancelled) The program operating system of Claim 27,

        wherein each flow gate of said flow gate collection has an associated maximum safe carrying capacity; and

30   wherein said program code segment supporting contracting said sum of said associated AC power transfer for each of said AC power transfers of said AC power transfer collection on each of said flow gates of said flow gate collection comprises;

        a program code segment supporting said sum of said associated AC power transfer for each of said AC power transfers of said AC power transfer collection satisfying

said associated maximum safe carrying capacity on each of said flow gates of said flow gate collection.

29. (cancelled) The program operating system of Claim 27,

wherein each of said AC power transfers of said AC power transfer collection is to take place over a first time interval; and

wherein said program code segment supporting contracting said sum of said associated AC power transfer for each of said AC power transfers of said AC power transfer collection on each of said flow gates of said flow gate collection comprises;

a program code segment supporting contracting said sum of said associated A C power transfer for each of said AC power transfers of said AC power transfer collection to take place at least over at least said first time interval on each of said flow gates of said flow gate collection.

30. (cancelled) The program operating system of Claim 27,

wherein each of said AC power transfers of said AC power transfer collection has an associated amount of energy from an associated first node of said AC power network to a second node of said AC power network; and

said program code segment supporting contracting said sum of said associated A C power transfer for each of said AC power transfers of said AC power transfer collection on each of said flow gates of said flow gate collection comprises

a program code segment essentially calculating an amount of energy of said associated AC power transfer on each of said flow gates of said flow gate collection as essentially an associated linear, skew-symmetric function of said associated amount of energy from said associated first node to said associated second node.

31. (cancelled) The program operating system of Claim 25,

wherein each of said flow gates of said flow gate collection is a significant flow gate of said AC power network.

32. (cancelled) The program operating system of Claim 25,

wherein each significant flow gate of said AC power network is a flow gate in said flow gate collection.

33. (cancelled) The program operating system of Claim 25,

wherein said program code segment supporting contracting for said AC power transfer on said AC power network further comprises;

a program code segment supporting contracting for said AC power transfer on said AC power network to create an agreed contract by a first party to own AC power transfer trading rights with associated AC power transfers on each of said flow gates of said flow gate collection; and

5   a program code segment supporting enabling said first party to further contract to sell said first party owned AC power transfer trading rights.

34.   (cancelled) The program operating system of Claim 33,

wherein each of said flow gates of said flow gate collection has an associated maximum safe carrying capacity; and

10   further comprising a program code segment supporting scheduling said AC power transfer for said agreed contract comprising;

a program code segment supporting determining whether said associated A C power transfer of said flow gate of said flow gate collection satisfies said associated maximum safe carrying capacity of said flow gate for each of said flow gates of said flow

15 gate collection; and

a program code segment supporting approving said AC power transfer whenever said associated AC power transfer of said flow gate satisfies said maximum safe carrying capacity for each said flow gates of said flow gate collection.

35.   (cancelled) The program operating system of Claim 34,

20   wherein performing said program code segment supporting enabling said first party to further contract to sell said first party owned AC power transfer trading rights occurs before performing said program code segment supporting scheduling said AC power transfer for said agreed contract.

36.   (cancelled) The program operating system of Claim 34,

25   wherein said agreed contract by said first party to own said AC power transfer trading rights is to take place over a first time interval; and

wherein performing said program code segment supporting scheduling said A C power transfer for said agreed contract occurs before said first time interval.

37.   (cancelled) The program operating system of Claim 36,

30   wherein determining whether said associated AC power transfer of said flow gate of said flow gate collection satisfies said associated maximum safe carrying capacity of said flow gate for each of said flow gates of said flow gate collection further comprises;

determining whether said associated AC power transfer of said flow gate of said flow gate collection satisfies said associated maximum safe carrying capacity of said flow gate for each of said flow gates of said flow gate collection over said first time interval; and

wherein approving said AC power transfer whenever said associated AC power transfer of said flow gate satisfies said maximum safe carrying capacity for each of said flow gates of said flow gate collection further comprises;

approving said AC power transfer over said first time interval whenever said associated AC power transfer of said flow gate satisfies said maximum safe carrying capacity for each said flow gates of said flow gate collection over said first time interval.

38. (cancelled) The program operating system of Claim 37, further comprising:

a program code segment supporting contracting for an AC power transfer collection of at least one AC power transfer to create an agreed contract by a first party to own A C power transfer trading rights with associated AC power transfers on each of said flow gates of said flow gate collection further comprises;

a program code segment supporting contracting for a sum of associated AC power transfers for all AC power transfers of said AC power transfer collection to create a contract for an associated AC power transfer for said collection of AC power transfers for each of said flow gates of said flow gate collection.

39. (cancelled) The program operating system of Claim 38,

wherein each of said AC power transfers of said AC power transfer collection has an associated amount of energy from an associated first node of said AC power network to said second node of said AC power network;

wherein a program code segment supporting contracting for a sum of associated A C power transfers for all AC power transfers of said AC power transfer collection to create a contract for an associated AC power transfer for said collection of AC power transfers for each of said flow gates of said flow gate collection comprises;

a program code segment calculating each of said associated AC power transfers on said flow gate of said AC power transfer has an amount of energy as an essentially linear, skew-symmetric function of said amount of energy from said associated first node to said associated second node of said AC power transfer of each of said flow gates of said flow gate collection.

40. (cancelled) The program operating system of Claim 33,

wherein said program code segment supporting enabling said first party to further contract to sell said first party owned AC power transfer trading rights further comprises;

APXX0003

a program code segment supporting enabling said first party to further contract to sell said first party owned AC power transfer trading rights for said associated AC power transfer for a first of said flow gates of said flow gate collection.

41.   (cancelled) The program operating system of Claim 40,
wherein said program code segment supporting enabling said first party to further contract to sell said first party owned AC power transfer trading rights further comprises;
a program code segment supporting enabling said first party to further contract to sell said first party owned AC power transfer trading rights for said associated AC power transfer for each of said flow gates of said flow gate collection.

42.   (cancelled) The program operating system of Claim 33,
wherein said first party is a human being.

43.   (cancelled) The program operating system of Claim 42,
wherein said first party is a corporate entity.

44.   (cancelled) The program operating system of Claim 43,
wherein said first party is represented by an agent authorized by said first party to act on behalf of said first party with respect to contracting said AC power transfer.

45.   (cancelled) The program operating system of Claim 25,
wherein said computing system is further comprised of
a client computer collection containing at least one client computer with coupled computer readable memory operated by a client;
a server system containing at least one server computer with coupled computer readable memory; and
a network coupling each of said client computers of said client computer collection and coupling at least a first of said server computers of said server system; and
wherein said program code segment supporting contracting said AC power transfer on said AC power network further comprises;
a program code segment residing in said computer readable memory coupled to at least one of said server computers of said server system supporting identifying a first of said clients operating a first of said client computers as said first party.

46.   (cancelled) The program operating system of Claim 45, further comprising

a program code segment supporting said first client user operating said first client computer as said first party residing on said computer readable memory coupled to said first client computer comprising:

a program code segment supporting receiving stimulus from said first user to create

5   a received stimulus stream;

a program code segment supporting communicating via said network with said first server computer to create a received server stream and to create a server delivery stream; and

a program code segment supporting displaying a status based upon said received

10   stimulus stream and said received server stream; and

wherein said program code segment supporting contracting said AC power transfer on said AC power network further comprises;

a program code segment supporting communicating via said network with said first client computer to create a received server delivery stream.

15   47.   (cancelled) The program operating system of Claim 46,

wherein said program code segment supporting contracting AC power transfer on said AC power network further comprises;

a program code segment supporting operating a virtual trading floor containing a market interval for trading AC power transfer for each of said flow gates of said flow gate

20   collection further comprising;

a program code segment supporting transforming said received server delivery stream into an order collection containing at least one bid order and at least one ask order; and

a program code segment supporting contracting AC power transfer on said A C

25   power network to create an agreed contract based upon a first of said bid orders of said order collection and based upon a first of said ask orders of said order collection.

48.   (cancelled) The program operating system of Claim 47,

wherein each of said validated orders of said validated order collection belongs to a collection comprising a bid type and an ask type;

30   wherein program code segment supporting contracting said AC power transfer on said AC power network to create an agreed contract further comprises

a program code segment supporting contracting said AC power transfer on said AC power network to create an agreed contract based upon a first bid type order of said validated orders of said validated order collection and a first ask type order of said

35   validated orders of said validated order collection.

49.   (cancelled) The program operating system of Claim 48,

wherein supporting contracting for said AC power transfer on said AC power network to create an agreed contract by a first party to own AC power transfer trading rights with associated AC power transfers on each of said flow gates of said flow gate collection

5   further comprises;

a program code segment supporting contracting for said AC power transfer on said AC power network to create an agreed contract by a first party to own AC power transfer trading rights with associated AC power transfers on each of said flow gates of said flow gate collection based upon a first bid type order of said validated orders of said validated

10   order collection and a first ask type order of said validated orders of said validated order collection.

50.   (cancelled) The program operating system of Claim 48,

wherein at least one market interval is associated with each flow gate of said flow gate collection.

15   51.   (cancelled) The program operating system of Claim 50,

wherein said server system is further comprised of a reliable server collection of server computers performing a reliable distributed system with a process group collection of at least one process group;

wherein each of said server computers is accessibly coupled with a computer

20   memory, of said reliable server system; and

wherein said program operating system includes program code segments implementing at least one of the process groups of said collection of process groups.

52.   (cancelled) A computing system supporting program operating system of program

25   code segments with program code segments contracting an AC power transfer on an A C power network with a flow gate collection containing at least one flow gate, comprised of:

at least one computer, each of said computers in said computing system coupled to an associated computer readable memory;

wherein each of said program code segments resides in said computer readable

30   memory coupled to at least one of said computers in said computing system;

wherein said program operating system contains a program code segment supporting contracting an AC power transfer on said AC power network further comprising;

a program code segment supporting contracting an associated AC power transfer on each of said flow gates of said flow gate collection.

35

53.   (cancelled) A computing system of Claim 52,

wherein said program code segment supporting contracting for said AC power transfer on said AC power network further comprises;

a program code segment supporting contracting for said AC power transfer on said
5   AC power network to create an agreed contract by a first party to own AC power transfer trading rights with associated AC power transfers on each of said flow gates of said flow gate collection; and

a program code segment supporting enabling said first party to further contract to sell said first party owned AC power transfer trading rights.
10

54.   (cancelled) A computing system of Claim 53,

wherein each of said flow gates of said flow gate collection has an associated maximum safe carrying capacity; and

said program operating system further containing a program code segment
15   supporting scheduling said AC power transfer for said agreed contract comprising;

a program code segment supporting determining whether said associated A C power transfer of said flow gate of said flow gate collection satisfies said associated maximum safe carrying capacity of said flow gate for each of said flow gates of said flow gate collection; and
20   a program code segment supporting approving said AC power transfer whenever said associated AC power transfer of said flow gate satisfies said maximum safe carrying capacity for each said flow gates of said flow gate collection.

55.   (cancelled) A computing system of Claim 54, further comprised of:
25   a client computer collection containing at least one client computer with coupled computer readable memory operated by a client;

a server system containing at least one server computer with coupled computer readable memory; and

a network coupling each of said client computers of said client computer collection
30   and coupling at least a first of said server computers of said server system; and

wherein said program code segment supporting contracting said AC power transfer on said AC power network further comprises

a program code segment residing in said computer readable memory coupled to at least one of said server computers of said server system supporting identifying a first of
35   said clients operating a first of said client computers as said first party.

56.   (cancelled) A computing system of Claim 55,

wherein said program operating system further comprising;

a program code segment supporting said first client user operating said first client computer as said first party residing on said computer readable memory coupled to said first client computer comprising;

a program code segment supporting receiving stimulus from said first user to create a received stimulus stream;

a program code segment supporting communicating via said network with said first server computer to create a received server stream and to create a server delivery stream; and

a program code segment supporting displaying a status based upon said received stimulus stream and said received server stream; and

wherein said program code segment supporting contracting said AC power transfer on said AC power network further comprises;

a program code segment supporting communicating via said network with said first client computer to create a received server delivery stream.

57.   (cancelled) A computing system of Claim 56,

wherein said program code segment supporting contracting AC power transfer on said AC power network further comprises;

a program code segment supporting operating a virtual trading floor containing a market interval for trading AC power transfer for each of said flow gates of said flow gate collection further comprising

a program code segment supporting transforming said received server delivery stream into an order collection containing at least one bid order and at least one ask order; and

a program code segment supporting contracting AC power transfer on said A C power network to create an agreed contract based upon a first of said bid orders of said order collection and based upon a first of said ask orders of said order collection.

58.   (cancelled) A computing system of Claim 57,

wherein each of said validated orders of said validated order collection belongs to a collection comprising a bid type and an ask type;

wherein said program code segment supporting contracting said AC power transfer on said AC power network to create an agreed contract further comprises;

a program code segment supporting contracting said AC power transfer on said A C power network to create an agreed contract based upon a first bid type order of said validated orders of said validated order collection and a first ask type order of said validated orders of said validated order collection.

5

59.   (cancelled) A computing system of Claim 58,

wherein said program code segment supporting contracting for said AC power transfer on said AC power network to create an agreed contract by a first party to own A C power transfer trading rights with associated AC power transfers on each of said flow gates

10   of said flow gate collection further comprises;

a program code segment supporting contracting for said AC power transfer on said AC power network to create an agreed contract by a first party to own AC power transfer trading rights with associated AC power transfers on each of said flow gates of said flow gate collection based upon a first bid type order of said validated orders of said validated

15   order collection and a first ask type order of said validated orders of said validated order collection.

60.   (cancelled) A computing system of Claim 59,

wherein at least one market interval is associated with each flow gate of said flow

20   gate collection.

61.   (cancelled) A computing system of Claim 60,

wherein said server system is further comprised of a reliable server collection of server computers performing a reliable distributed system with a process group collection

25   of at least one process group;

wherein each of said server computers is accessibly coupled with a computer memory, of said reliable server system; and

wherein said program operating system includes program code segments implementing at least one of the process groups of said collection of process